



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4822-1
Job Sheet 178076



Part No: D4822-1

Job Qty: 6 ea

Part Name: Upper Deflector, LH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/26/18

Job Tracking No:

Due Date: 7/16/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV C IPP REV:A NEW ISSUE 13-04-19 JLM VERIFIED BY:DD IPP REV:B 17.08.17 now plate material DD ver:DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		7/16/18	0.00	0.00	Start Up Machining-3		N/R
100	Bandsaw	6 pcs		7/16/18	0.00	0.99	Bandsaw1		N/R
110	Purchasing	6 pcs		7/16/18	0.00	0.00	Purchasing		18.07.00
115	Packaging	6 pcs		7/16/18	0.00	0.00	Packaging2		18.07.00
117	QC	6 pcs		7/16/18	0.00	0.00	QC6		18.07.31
120	Outsource	6 pcs		7/16/18			ATG001-VC		AUG 1 1 2018
122	QC	6 pcs		7/16/18	0.00	0.00	QC14		AUG 2 1 2018
140	QC	6 pcs		7/16/18	0.00	0.00	QC5		AUG 2 1 2018
170	Packaging	6 pcs		7/16/18	0.00	0.00	Packaging3-2		AUG 2 3 2018
190	QC21-SA	6 Ea		7/16/18	0.00	0.00	QC21		AUG 2 4 2018

Part Op 100 - CUT AT 32.00" LONG

Descriptions: 110 - ISSUE P/O: 40049 POSSIBLE SUPPLIER:WEJAY ***1 BLANK MAKES 2 PARTS**** Certificate of MAY 3 0 2018

conformaty required

115 - Receive & Inspect for Damage & Mat'l Certs

117 - QC6- All purchased or subcontracted products

120 - HARD ANODIZE IAW MIL-A-8625 TYPE 3 COLOUR BLACK PRIME AS PER DWG D4821 REV. B

122 - QC14- Inspect Spray Paint

140 - QC5- Inspect part completeness to step on W/O

170 - Identify as per dwg & Stock Location:

190 - QC21- Final Inspection - Work Order Release

D4822-1

S089483

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M7075T6S4.000X4.000	7075-T6 Sheet 4.000' X 4.000" cut to size: 32" LONG	8.1000 ft (1.35 ea)	90-Start up Operation	S089483
D4822-1P	Upper Deflector, LH	6 pcs (1 ea)	110-Purchasing	7081531

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M7075T6S4.000X4.000	8	13	0
110-Purchasing	D4822-1P	6	0	0

Part Specifications

WORK ORDER NON-CONFORMANCE / UPDATE



DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐

Skid-tube ☐

Cross tube ☐

Water Jet ☐

Engineering Quality Other ☐

AGAINST DEPARTMENT/PROCESS

S1042) Approval ☐

Completed By _____

and / Supervisor
Qual Verification

QA Coordinator
Approval

DART Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S089483
Part: 04822-1
Job No: 178076
Serial No/Batch: S089483
Revision: C
Inspector:
Exp Date:
Instructions: Various STC's

Date: 08/14/18

Description Work Order Deviation

Date: _____ Step #: _____

Root Cause

Environment	☐	No Re-verification	☐
Design	☐	Operator	☐
Doc/Data	☐	Offset/Setup	☐
Equip/Tooling	☐	Supplier	☐
Handling/Pre	☐	Training	☐
Material	☐	Use for Testing	☐
Internal Transport	☐	Poor Information	☐
Tribal Knowledge	☐	Rushing	☐
LOA	☐	Product Improvement	☐
Substation	☐	Process Improvement	☐
Past Expiry Date	☐	Manufacturing Process	☐
Misidentified	☐	Past Due	☐

Pressure/Forced

Bending

Centre Not Concentric

Cracks

Crimp/Kink/Ripple/Wave

Cuffs

Crushing

Heat Treat

Wave/Twist in Tube

Marks/Chatter

Temperature/Time

Set-up

BOM/Route

Broken/Damage/Defect

Inspection Incomplete/Unqualified

Contamination

Countersink

Cut Too Short

Instructions Incomplete/Unclear

Drill Holes

Folio/Program

Grain

Weld

Wrong Stock Pulled

Out of Sequence

Off-set

Mislabeled

Fit/Function

Misaligned/off center

Positioned Wrong

Outside Dimensions

Over/Under tolerance

Part Incorrect

Part Lost/Missing

Part Moved

Drawing

Finish

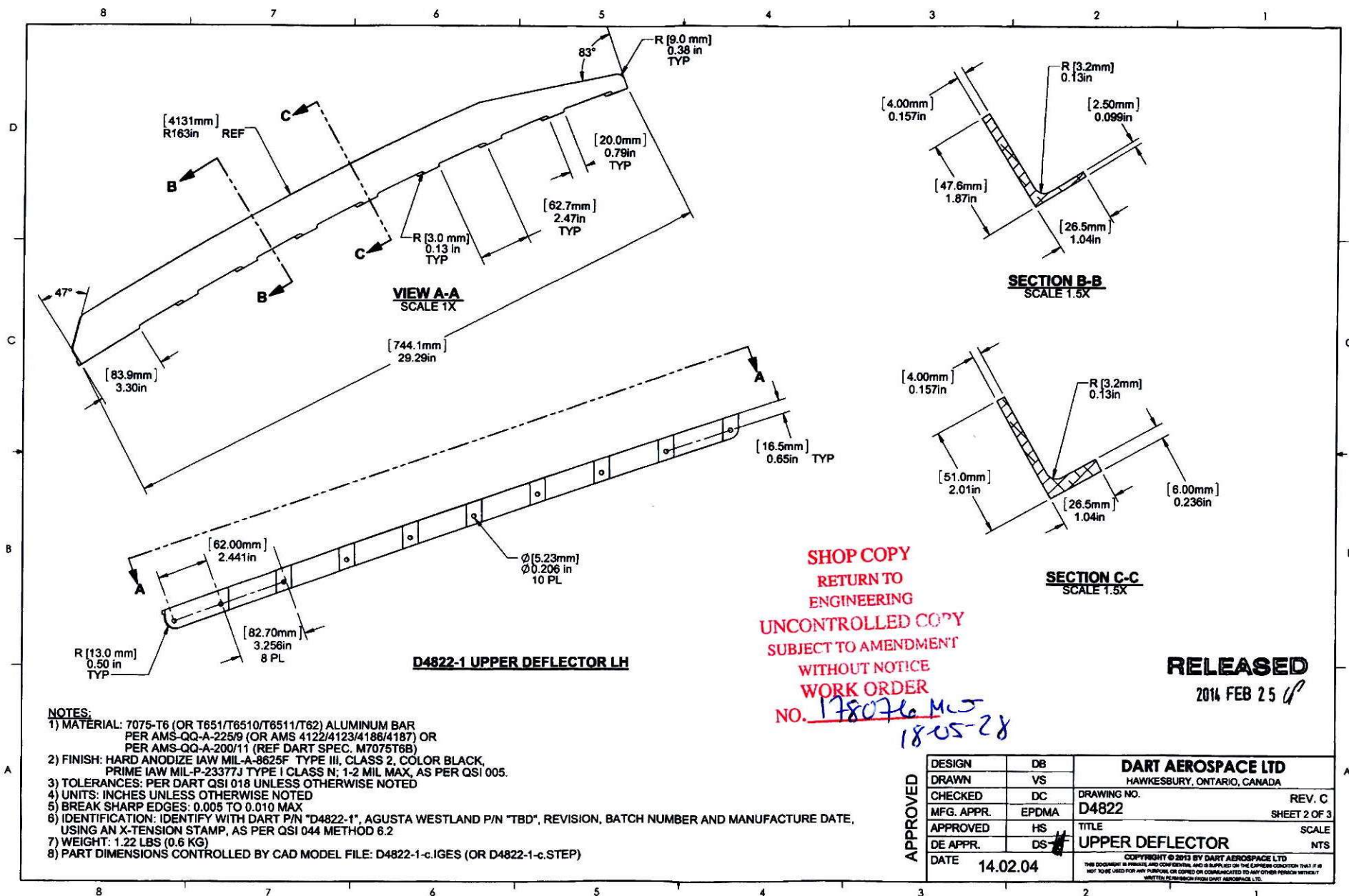
Mistread

Turning Sequence

OTHER: _____

Specifications could not be found.

Plex 5/28/18 7:18 AM Dart.lajeunesse.marie





Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040049**

Supplier: WEJ001-VC
Wejay Machine Products Co. Ltd
600 O'Connor Drive
Kingston
ON
K7P 1N3 Canada
Phone: 613-384-1662
Fax: 613-384-2997

PO No: PO040049

PO Date: 5/30/18

Due Date: 7/12/18

MAY 30 2018

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items											
Line Item	Part	Supplier Part No	Item No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	D4821-1P			Windshield Deflector As per Dwg D4821 Rev. B	Firmed	7/12/18	4 pcs	0 pcs	4 pcs	\$1,156.00/pcs	\$4,624.00
Line Item Note W/O 178075											
2	D4822-1P			Upper Deflector, LH As per Dwg D4822 Rev. C	Firmed	7/12/18	6 pcs	0 pcs	6 pcs	\$1,064.00/pcs	\$6,384.00
Line Item Note W/O 178076											
3	D4822-2P			Upper Right Deflector As per Dwg D4822 Rev. C	Firmed	7/12/18	5 pcs	0 pcs	5 pcs	\$1,064.00/pcs	\$5,320.00
Line Item Note W/O 178077 5 PCS MACHINE WITH DART MAT'L AND 1 MACHINE WITH WEJAY MATERIAL.											
4	D4822-2P			Upper Right Deflector As per Dwg D4822 Rev. C	Firmed	7/12/18	1 pcs	0 pcs	1 pcs	\$1,302.00/pcs	\$1,302.00
Line Item Note W/O 178348 MAT'L SUPPLIED BY WEJAY											
										Grand Total: \$17,630.00	

Order Notes



600 O'CONNOR DRIVE, KINGSTON, ONTARIO K7P 1N3

PHONE: (613) 384-1662

FAX: (613) 384-2997

CERTIFICATE OF COMPLIANCE

CUSTOMER: Dart Aerospace		DATE: June 13, 2018	
		P.O.# PO 040049	
		WEJAY JOB# 39140	
I hereby certify that the following material has been inspected/tested and conforms to the requirements and specifications as stated in your contract and as noted below.			
PART NO.	QTY.	PROCESS (ES)	SPECIFICATION / REV
D4822-1P 'Upper Deflector, Left Hand ' w/o 178076	6	Machined complete per drawing req'ts.	D4822 / rev. C
D4822-2P 'Upper Deflector, Right Hand' w/o 178077	5	Machined complete per drawing req'ts.	D4822 / rev. C
D4822-2P 'Upper Deflector, Right Hand' w/o 178348	1	Machined complete per drawing req'ts.	D4822 / rev. C
Note: 1) Material for w/o 178076 & 178077 is from DART material lot# M131552. 2) Material Test Report attached for w/o 178348 - ref. 'KUMZ' Lot# 725367 (Wejay TN# 34182-1). 3) 1st Article Inspection reports attached.			

Records of Inspection/Test will be retained for 5 years minimum.

Sincerely,



Clifford Smith

Authorized Q.A. Signatory



INSPECTION CERTIFICATE № 17.114662

EN 10204 - 3.1

Consigner: KAMENSK URALSKY METALLURGICAL WORKS 5, Zavodskaya Str., Kamensk Ural'sky, Sverdlovsk Region, 623405, Russia Tel: +7 (3439) 39 54 17, Fax: +7 (3439) 39 52 49										JOINT STOCK COMPANY									
Buyer: A.S. Mill Products, Inc. Consignee: A.S. MILL PRODUCTS, INC.										Quantity, pcs: 1 Net Weight, kg.: 680									
P.O. No: CHI MARCH Article No:										S.O. No: N16607 Item No: 1.4 Package No: 606722									
Description of Goods: Plates Grade of Product:										Requirements on the Products: Material conforms to quality of alloy: 7075 T651									
Dimensions, inch (mm) 2"x48.5"x144.5" 50.800X1231.9X3670.3										Product conforms to all requirements of: ASTM B209-14; SAE AMS-QQ-A-250/12 Rev. A (2013); SAE AMS 4045 Rev. K (2010). This product conforms to European Union RoHS Directive 2011/65/EU									
Mechanical Properties																			
The Condition of Tested Standards	Lot No.	Heat lot No.	HT Charge No.	Sampling direction	Tensile Strength, Rm / Cut test		Yield Strength, Rp0.2% / Clenching test		Elongation, %		Hardness, HBW								
					min	max	min	max	min	max									
Required				LT	77.0	-	67.0	-	6	-	-								
	725367	12-4860	02033	LT	84.2	84.3	70.7	75.8	13.0	13.8	-								
Chemical Composition, %																			
Element	Silicon Si	Iron Fe	Copper Cu	Manganese Mn	Magnesium Mg	Chromium Cr	Zinc Zn	Titanium Ti											
Required	0.40	0.50	1.2 - 2.0	0.30	2.1 - 2.9	0.18 - 0.28	5.1 - 6.1	0.20											
Contents	0.04	0.17	1.3	0.03	2.5	0.18	5.9	0.05											
Element									Other Elements		Aluminum Al								
									Each	Total									
Required									0.05	0.15	remainder								
Contents									0.05	0.15	remainder								
Other Tests																			
Method	Macro-structure	Micro-structure	UT	K1c	Electro-conductivity, IACS%	BCF	Contents of metals of metals 100gr	Raw material used for manufacturing supplied products was tested for compliance with international regulation safety regulations during incoming inspection. Russia is country of melt and manufacture.											
Result	-	ok	-	-	-	-	0.05												

On behalf:

Date:

QCB Inspector

Inspection Department Engineer

J.S.Co. "KUMZ"

30.04.2017

Zyryanova K.V.

Alekhina N.V.



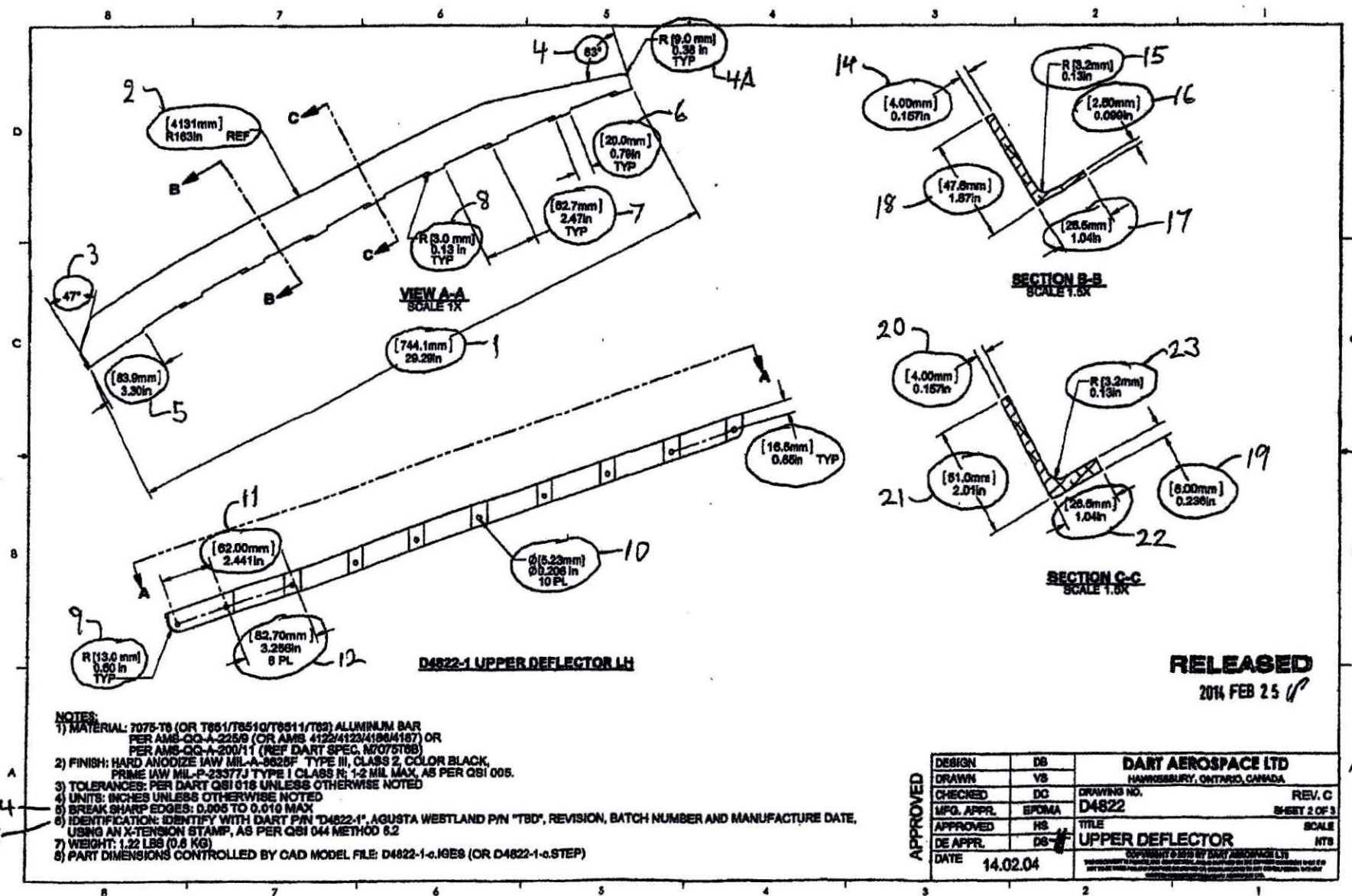
TN34182-1
 Job # 39140
 rec'd June 4/18

file:///C:/Users/30sal/AppData/Local/Microsoft/Windows/Temporary%20Internet%20Files/... 8/1/2017

REF 'DART' P.O.# 040049 ITEM 4 (W/0178348)
 PART# D4822-2P



JUNE 13/18





600 O'CONNOR DRIVE
KINGSTON, ONTARIO
K7P 1N3

INSPECTION / TEST REPORT

JOB No. 39140

PAGE: 1 of 1

CUSTOMER: Dart Aerospace

CUST. P.O.# 040049

PART No. D4822-1

DESCRIPTION: Deflector Left Hand

DWG No. D4822

REV. C

E.C.O. --

MATERIAL: 7075-T651 ALUMINUM

INSPECTOR: Cliff Smith

QUANTITY
REC'D: 6

ACCEPT:
6

REJECT:
-

N.C.R.#
-

DATE: June 12, 2018

WMP
03

INSTRUCTIONS, COMMENTS: Standard Tolerances per DART QSI 018 unless otherwise noted
-First Article Inspection-

ITEM REF. No.	CHARACTERISTIC (DIMS IN mm)	DETAILS	TOLERANCE	DWG SHT/ZONE	RESULT	QTY. INSP.	COMMENTS (ACC. REJ. REW. NMR #)
1	29.29"	View A-A	±.03	2/C6	29.30	1	Passed
2	R163" ref		±.10	2/D7	Passed	1	Passed
3	47°		±.5°	2/C8	46.5°	1	Passed
4	83°		±.5°	2/D5	82.5°	1	Passed
4A	R 0.38" typ.		±.03	2/D4	R .380 typ.	1	Passed
5	3.30"		±.03	2/C8	3.308	1	Passed
6	0.79" typ.		±.03	2/D5	.789- .793	1	Passed
7	2.47		±.03	2/D5	2.467- 2.471	1	Passed
8	R 0.13 typ.		±.03	2/C6	R .125 typ.	1	Passed
9	R0.50" typ		±.03	2/B8	R .50 typ.	1	Passed
10	Ø0.206 hole thru	10 pl.	+ .005/ - .001	2/B5	Ø .206- .207	1	Passed
11	2.441"		±.010	2/B7	2.443	1	Passed
12	3.256" typ.	8 pl.	±.010	2/B7	3.255- 3.257	1	Passed
13	0.65" typ.	10 pl.	±.03	2/B4	.648- .653	1	Passed
14	0.157"	Section B-B	±.01	2/D3	.157- .160	1	Passed
15	R0.13" typ. e-model is .19"R		±.03	2/D2	R .19 typ. (per e-model)	1	Passed
16	.099"		±.01	2/D2	.089- .099	1	Passed
17	1.04"		±.03	2/D3	1.042- 1.043	1	Passed
18	1.87"	Section C-C	±.03	2/D3	1.866- 1.871	1	Passed
19	0.236"		±.01	2/B1	.226- .2355	1	Passed
20	0.157"		±.01	2/C3	.157- .160	1	Passed
21	2.01"		±.03	2/B3	2.003- 2.009	1	Passed
22	1.04"		±.03	2/B2	1.042- 1.043	1	Passed
23	R0.13" typ. e-model is .19"R		±.10	2/C2	R .19 typ. (per e-model)	1	Passed
24	Deburring	Per note 5	.005-.010	2/A8	Passed	1	Passed
25	Identification	Per note 6		2/A8	N/A	1	Passed

DESIGN	DB	DATE	14.02.04
DRAWN	VS	DE APPR.	DS
CHECKED	DC	APPROVED	HS
DRAWING NO.	D4822	MPR. APPR.	EPDMA
MANUFACTURED BY DART AEROSPACE LTD		TITLE	UPPER DEFLECTOR
REV. C		SCALE	N/A
SHEET 8 OF 8			

APPROVED

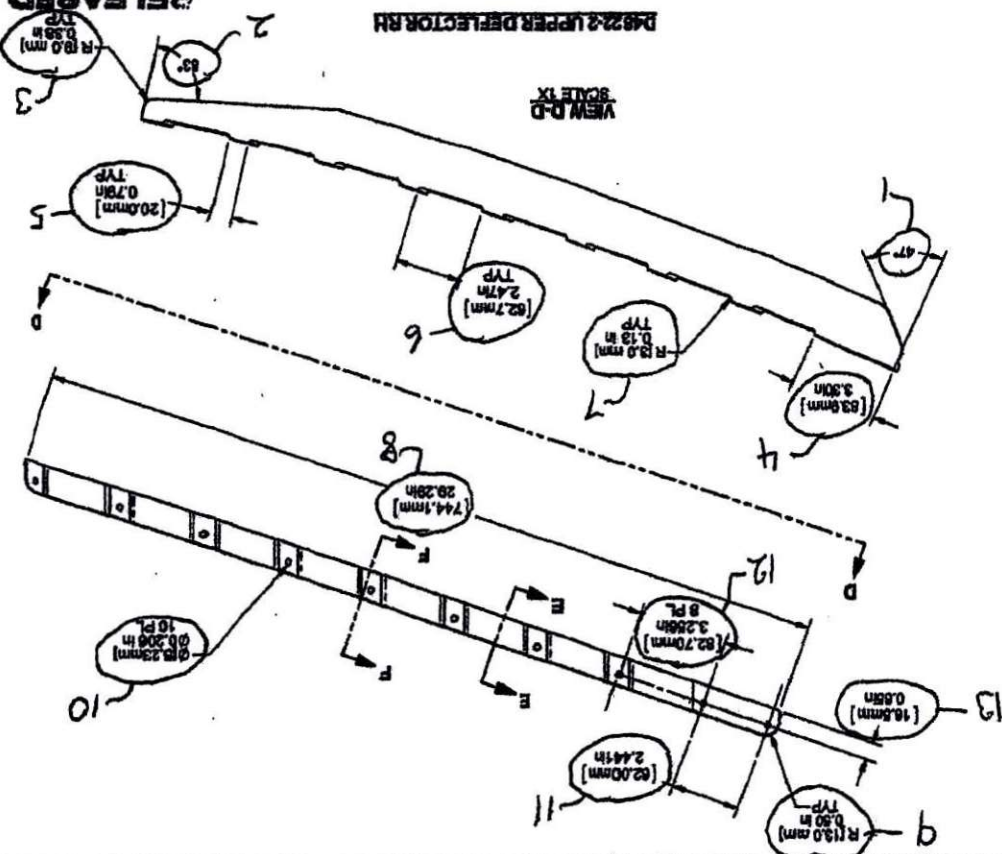
6) IDENTIFICATION: IDENTIFY WITH DART P/N D4822-2, AGUSTA WESTLAND P/N TBD, REVISION, BATCH NUMBER AND MANUFACTURE DATE.

- NOTES:
- 1) MATERIAL: 7075-T6 (OR T801/T8010/T8011/T802) ALUMINUM BAR
 - 2) FINISH: HARD ANODIZE MW MIL-A-8626F TYPE III, CLASS II, COLOR BLACK PER AMS-QQ-A-220/11 (REF DART SPEC. M7076700)
 - 3) TOLERANCES: PER DART Q61 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N D4822-2, AGUSTA WESTLAND P/N TBD, REVISION, BATCH NUMBER AND MANUFACTURE DATE.
 - 7) WEIGHT: 1.22 LBS (0.6 KG)
 - 8) PART DIMENSIONS CONTROLLED BY CAD MODEL FILE: D4822-2-010ES (D4822-2-0-STEP)

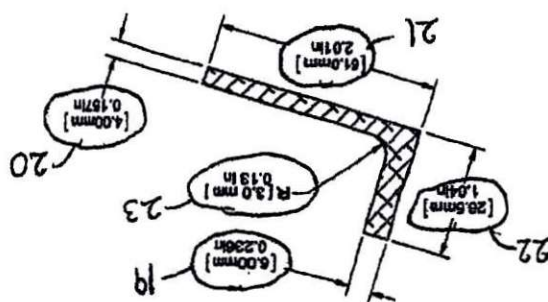
RELEASED
2014 FEB 25 #

D4822-2 UPPER DEFLECTOR RH

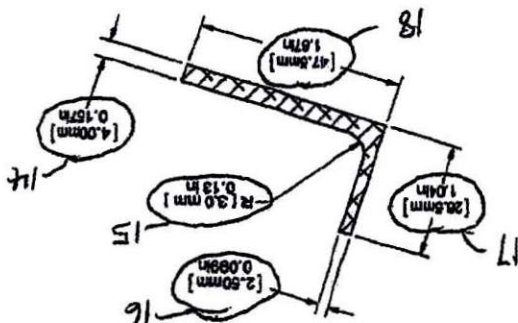
SCALE 1X
VIEW D-D



SCALE 2X
SECTION F-F



SCALE 2X
SECTION E-E





600 O'CONNOR DRIVE
KINGSTON, ONTARIO
K7P 1N3

INSPECTION / TEST REPORT

JOB No. 39140

PAGE: 1 of 1

CUSTOMER: Dart Aerospace

CUST. P.O.# 040049

PART No. D4822-2

DESCRIPTION: Deflector Right Hand

DWG No. D4822

REV. C

E.C.O. --

MATERIAL: 7075-T651 ALUMINUM

INSPECTOR: Cliff Smith

QUANTITY

ACCEPT:

REJECT:

N.C.R.#

DATE: June 12, 2018

REC'D: 1

1

-

-

WMP
03

INSTRUCTIONS, COMMENTS: Standard Tolerances per DART QSI 018 unless otherwise noted

ITEM REF. No.	CHARACTERISTIC (DIMS IN mm)	DETAILS	TOLERANCE	DWG SHT/ZONE	RESULT	QTY. INSP.	COMMENTS (ACC. REJ. REW. NMR #)
1	47°	View D-D	±.5°	3/B5	46.5°	1	Accepted
2	83°		±.5°	3/B2	82.5°	1	Accepted
3	R 0.38" typ.		±.03	3/B1	R .380 typ.	1	Accepted
4	3.30"		±.03	3/C5	3.304	1	Accepted
5	0.79" typ.		±.03	3/B1	.786- .795	1	Accepted
6	2.47		±.03	3/B3	2.464- 2.470	1	Accepted
7	R 0.13 typ.		±.03	3/C4	R .125 typ.	1	Accepted
8	29.29"		±.03	3/C3	29.30	1	Accepted
9	R0.50" typ		±.03	3/D5	R .50 typ.	1	Accepted
10	Ø0.206 hole thru	10 pl.	+ .005/ -.001	3/D1	Ø .208- .209	1	Accepted
11	2.441"		±.010	3/D4	2.442	1	Accepted
12	3.256" typ.	8 pl.	±.010	3/D4	3.255- 3.257	1	Accepted
13	0.65" typ.	10 pl.	±.03	3/D5	.652- .654	1	Accepted
14	0.157"	Section E-E	±.01	3/D6	.158- .160	1	Accepted
15	R0.13" typ. e-model is .19"R		±.03	3/D7	R .19 typ. (per e-model)	1	Accepted
16	.099"		±.01	3/D7	.101- .105	1	Accepted
17	1.04"		±.03	3/D8	1.043- 1.045	1	Accepted
18	1.87"	Section F-F	±.03	3/C7	1.872- 1.875	1	Accepted
19	0.236"		±.01	3/C7	.238- .243	1	Accepted
20	0.157"		±.01	3/B6	.158- .160	1	Accepted
21	2.01"		±.03	3/B7	2.009- 2.014	1	Accepted
22	1.04"		±.03	3/B8	1.043- 1.047	1	Accepted
23	R0.13" typ. e-model is .19"R		±.10	3/B7	R .19 typ. (per e-model)	1	Accepted
24	Deburring	Per note 5	.005-.010	3/A8	Passed	1	Accepted
25	Identification	Per note 6		3/A8	n/a	1	Accepted



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040669**

Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO040669

PO Date: 8/1/18

Due Date: 8/13/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	176400	D5351-1	T-Bolt Spacer : Various STC's ANODIZE BLACK PER MIL-A-8625F TYPE I P.O.: :ATG	Firmed	-	8/8/18	20 pcs	0 pcs	20 pcs	\$11.80/pcs	\$236.00
2	178348	D4822-2	Upper Right Deflector : Various STC's Hard anodize IAW MIL-A-8825F TYPE III, CLASS 2, COLOR BLACK	Firmed	-	8/13/18	1 pcs	0 pcs	1 pcs	\$35.55/pcs	\$35.55
	178077			Firmed	-	8/13/18	5 pcs	0 pcs	5 pcs	\$35.55/pcs	\$177.75
5 X AUG 14 2018							Sub Total:	6	0	6	\$213.30
3	178076	D4822-1	Upper Deflector, LH : Various STC's HARD ANODIZE IAW MIL-A-8625 TYPE 3 COLOUR BLACK PRIME AS PER DWG D4821 REV. B	Firmed	-	8/13/18	6 pcs	0 pcs	6 pcs	\$35.55/pcs	\$213.30
Grand Total:											\$662.60

Order Notes

Order Notes**Procurement Quality Clauses**

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 8/3/18 10:31 AM dart.tsimiklis.chrisoula



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 915789

Date: 14-Aug-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chrisoula Tsimiklis
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
✓ 6 ea	Part: D4822-2 ✓ Upper Right Deflector Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 23538 PO: PO040669 Line: 2	Rev: C	
✓ 6 ea	Part: D4822-1 ✓ Upper Deflector, LH Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 23539 PO: PO040669 Line: 3	Rev: B	
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>14/8/18</u> Certified Signature: _____ Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
Made in Canada.			